Guidelines for Preparation of the
2004 Research & Technology (R&T) Report

A. Format for the R&T Report

1. The R&T report will be organized into the major categories of programs and projects, research and technology, computing sciences, engineering and technical services, and technology transfer and partnership.

2. Under each of the major categories, there will be subheadings for the divisions, then for the individual articles.

3. Special recognition, such as R&D100, Best Paper, or Software of the Year will be noted. An index of authors will be included.

4. One or more photographs and/or drawings from those submitted with the articles will be selected and featured on the R&T cover.

5. For examples, see previous R&T reports (http://www.grc.nasa.gov/WWW/RT/).

B. Content of Articles

1. **NO ITAR, PROPRIETARY, LIMITED DISTRIBUTION, OR CLASSIFIED INFORMATION SHOULD BE INCLUDED IN THE R&T ARTICLES**. If you are doing your research in cooperation with a private company or university, please let them know in advance what you will be publishing and that it will be available on the Web.

2. Articles should contain about 300 to 500 words typed in MS Word. Please use minimal formatting. An electronic or hard copy figure or photograph should accompany your article.

3. All articles are to be written in language understandable to a layperson but useful to a technical audience.

4. The introductory paragraph is to be a short summary in simple language. This paragraph is for the *nontechnical* audience.

5. The writeup should clarify how the work was done—in-house, on contract, or through a university grant. The university or the major contractor should be identified.

6. Trade names should be replaced with generic terms where possible. If included, the company who owns the trade name (and the state or country where they are located, if there is only one location) should be given in parentheses after the trade name.

7. All symbols and acronyms should be defined.

8. The writeup should highlight one or more major accomplishments for FY 2004. The status of the program, completed or ongoing, should be stated. Plans can be mentioned, but avoid making promises of future work.

9. Because all articles will be accessible individually from the Web, every article should be identified with Glenn. Any external or internal impact on the NASA program should be identified, including Glenn's role in the research.

10. Key words should be provided so that they can be encoded in the Web version for Internet search engines to use.

11. A short list of pertinent references may be included with each article. Please provide complete citation information so that the Library can verify the references. If ITAR or other limited distribution (including HITEMP) references are to be included, we will need the name of the branch, division, or office that controls and distributes the document. The Library should be able to help you with this.

12. Each article should identify the Glenn contact(s), telephone number(s), e-mail address(es), current letter org code(s) (e.g., PT or RS), and the NASA Headquarters program office that funded the work (see the R&T Article Submission Form available at http://www.grc.nasa.gov/WWW/RT/ and the sample at the end of these guidelines). Contacts should be able to answer technical inquiries about the article. Contacts are usually authors. **If possible, include at least two contacts (at least one NASA employee)**.

13. If applicable, Web address(es) (URLs) for extra subject area or organization information should be noted. These will be listed in the printed version and formatted as hyperlinks in the Web version (see the sample at the end of these guidelines).

C. Figures and Photographs

1. Where possible or appropriate, a photograph or figure should accompany the text. Color photographs and figures are encouraged. Photographs and figures will be used in color in the Web version and in black and white (B&W) in the printed version. Make a photocopy of a color figure to see if the key will be readable in the B&W printed version. Create a separate B&W figure to be used for the printed B&W version of the R&T, if necessary.

2. Try to limit your submission to one photograph and/or one figure.

3. **All figures and photographs should have captions**.

4. **If a person with visual limitations would not be able to understand the essential aspects of a figure, photograph, or table from the caption and the description in the text, you should provide a separate long description.** In accordance with Section 508 accessibility requirements, the long description will be linked to the Web version of your article for people using audio Web browsers. It will not appear in the printed version of the R&T.

5. Scale labels should be descriptive terms (not just symbols), and all symbols should be defined. Composite photographs and chartlike figures, such as those used as viewgraphs, are not acceptable. Instead, incorporate the textlike and tablelike components of such figures into the body of the report.

6. For figures and photographs that were prepared by Glenn's Publishing Services (Graphics) or the Imaging Technology Center (Photo Lab), provide an identifying number (C#, CD#, E#, TM#, TP#, CR#, or CP#). If a photograph has a C#, please send along a glossy copy if you have one. This will reduce costs. Also, please indicate if you would like your glossy photographs returned to you.

7. **Do not embed figures in MS Word or PowerPoint**. Send the figures in separate electronic files. Acceptable file types are TIF, EPS, PCT, or high-resolution JPGs. Good-quality originals can be mailed to Nancy O'Bryan at MS 21–8 if the figure is not available in electronic format.

8. **Avoid GIF files**. GIF files reproduce very poorly in the B&W printed version. JPG files should not be used for the same reason unless they were created at a high resolution. To determine this, print the figure. File size also can indicate resolution (80 kB = very low, 1.2 MB = high).

9. **Written permission must be obtained by the author if any copyrighted photos, figures, or quotations are included**. Editorial must be given a copy of this letter. This process can be lengthy, so it should be started as soon as possible; Glenn's reference librarians, http://techlib.grc.nasa.gov/ref_serv.cfm, 216–433–5762) can help. E-mail permissions are acceptable and can speed up the process. Make certain that copyright holders know that the R&T will be posted on the Web.

D. Procedure for Submitting the Articles

1. The R&T report coordinator for each division will collect the articles that describe the high-quality accomplishments they want to be reported. Coordinators will do the initial editing and screening of the articles. **Electronic files should be named ORGCODE-lastname.xxx. Use the new letter org code; for example, RS-smith.doc (for the text) or RS-smith-f2.tif (for the second figure)**.

2. The division chief or office head will approve the technical content and the suitability for public distribution of all articles before they are submitted.

3. Coordinators will copy the articles to Publishing Services via the LTPRINT server (see the following instructions). **Note: Any files sent by someone other than the official coordinator will be forwarded to the appropriate coordinator for approval before being reviewed, edited, or processed**.

4. The R&T report focal point will review the submitted articles and, when needed, consult with the coordinators or the authors.

5. The final editing and layout will be done by Publishing Services. Edited text will be e-mailed to the primary contact of each article for a final check to ensure that meanings have not changed during the editing process, and copies of any revised figures will be mailed (or PDF files sent) to the primary contact for review. Changes must be received by the return date indicated to ensure their incorporation in the R&T.

Please use the following instructions to transfer files directly from a Glenn networked computer to the R&T2004 folder in the "Graphics" share on the LTPRINT server.

To transfer files from a **Macintosh OS X** machine
• Under the **GO** pull down menu, select **Connect to Server**.
• Select **LeRC B21 139.88.80**.
• Select **LTPRINT**. Click **Connect**.
• Sign on as a **Guest**.
• Select **Graphics**.
• Select **R&T2004** folder.
• Deposit files in appropriate org code folder.

To transfer files from a **Macintosh OS 9** machine
- Select **Chooser**.
- Select Apple Talk Zone **LeRC B21 139.88.80**.
- Select **LTPRINT**. Click **OK**.
- Sign on as a **Guest**.
- Select **Graphics**. Click **OK**.
- Open the **R&T2004** folder.
- Deposit files in appropriate org code folder.

To transfer files from a **Windows 2000 or XP** machine
- Select **My Network Places**.
- Select **Entire Network**.
- Select **Entire Contents** (this step can be skipped if you are using Explore: that is, if you right-clicked on the My Computer icon to access My Network Places)
- Select **Microsoft Windows Network**.
- Select **Ltid**.
- Select **Ltprint**.
- Open **Graphics** folder.
- Open **R&T2004** folder.
- Deposit files in appropriate org code folder.

To make a **shortcut** to transfer files from a **Windows 2000 or XP** machine
- Right click on the **Desktop**.
- Select **New**; select **Shortcut**.
- In the command line, enter **\\ltprint\Graphics\R&T2004** and click **Next**.
- Rename the shortcut from the default, if desired, and select **Finish**.
- Go to the **Desktop** and open the new shortcut.
- Deposit files in appropriate org code folder.

E. Deadline

As soon as possible, but no later than Thursday, September 30, 2004, coordinators should copy the draft text files, any electronic figure files, and the electronic R&T Article Submission Forms to the R&T folder on the LTPRINT file server as outlined. Coordinators should also send an e-mail to Nancy.L.Obryan@grc.nasa.gov listing which files were copied to the file server.

If you have trouble submitting the files, please send an e-mail to Nancy.L.Obryan@grc.nasa.gov describing the problem. Submit any hard copy figures to Nancy O'Bryan at MS 21–8.

F. Primary Objective

High-quality articles representing the best contributions of the center in FY 2004

G. **Task Order Number:** WBS: 22–090–20–70 (JO: X012795)

Title of article will be here

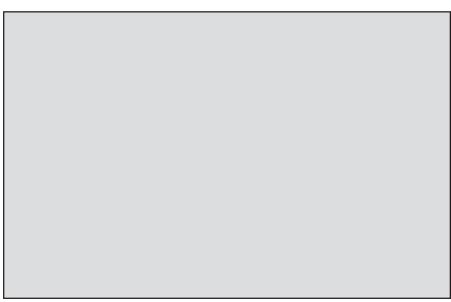Text is placed. Text is placed.

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Find out more about this research:
http://www.grc.nasa.gov

Reference
1. Author: Title of research article, NASA/TP—2000-888888, 2000. http://gltrs.grc.nasa.gov/cgi-bin/GLTRS/browse.pl?2002/TP-2000-888888.html

Glenn contacts:
Last name, First name,
Phone 000–000–0000
E-mail address,
Last name, First name,
Phone 000–000–0000
E-mail address

Contractor contact:
Last name, First name,
Phone 000–000–0000
E-mail address

Authors:
Author last name, First name,
Author last name, First name

Headquarters program office:
Aeronautics Research

Programs/Projects:
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Figure caption.